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Promoting U.S. products, Japan

- Southeast Asia—Emerging Soybean Market
- Argentina's Grain Boom

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Southeast Asia—Emerging Growth Market for Soybeans

By JAMES ISO
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Foreign Agricultural Service

WITH RISING incomes and changing eating habits whetting their appetite for meat and quality protein foods, four nations of Southeast Asia—the Philippines, Thailand, Malaysia, and Singapore—are turning to the world market for more livestock feed ingredients. This emerging demand, in turn, is stimulating imports of soybeans and soybean meal —including some quantities from the United States—in a trend that is seen continuing as Southeast Asia makes further economic headway.

So far, the United States has not captured much of the Southeast Asian soybean market. In 1975, it supplied about 15,600 metric tons of soybeans out of combined total imports by the four countries of around 76,000 tons. The United States has been more successful in soybean meal sales to the Philippines, exporting 46,712 tons there in 1974, although stiffened competition from other suppliers dropped that volume to 10,711 tons in 1975.

In contrast, Brazil—by gearing up its export program—has recently gained a substantial foothold in these markets, whereas in 1970 it shipped very little soybeans or meal to the region. And soybeans and soybean products also have come from Asian suppliers like the People's Republic of China (PRC), Indonesia, and even Japan, the latter exporting soybean meal crushed from U.S. soybeans. In addition, Thailand ranks both as an importer and exporter of soybeans, although the country's demand for beans appears to be outstripping its ability to boost domestic production.

Thus, Southeast Asia should be viewed as new frontier that can help keep world demand for soybeans and soybean products on the rise—and indirectly enhance U.S. sales prospects—rather than as a strong immediate market for U.S. soybeans. Long-term U.S. prospects appear more promising given the vast potential for diet improvement in this four-country region of nearly 100 million people.

All of these nations now import soybeans and meal primarily for use by their burgeoning livestock industries, with demand from poultry producers especially strong. However, the nations also are increasingly interested in soy protein for human consumption as a means of stretching still-limited meat supplies and upgrading diets generally.

The Philippines. Steadily increasing livestock and feed production has boosted Philippine imports of soybean meal, which in recent years have varied between 50,000 and 70,000 tons a year. Also, one firm reports contracting for 30,000-40,000 tons of soybeans in 1976, compared with total Philippine soybean

imports in 1975 of 12,417 tons. The 1976 soybean imports came largely from Brazil, whereas in 1975 the United States was a top supplier.

These imports enjoy a relatively low import duty of 10 percent. This compares with duties of over 60 percent for corn and 60 percent for vegetable oil aimed at protecting local industries. One problem that has curtailed imports of all products, however, is the current tight foreign exchange situation.

Philippine demand for meat, milk, and eggs has been spiraling upward in recent years, but some local sources indicate that Government policies at times have not achieved the desired results. For instance, an industry representative reports that to hold down costs of meat and dairy products, ceiling prices have been set for finished feed, while prices on feed ingredients have continued to rise.

Despite such problems, commercial feed production—currently totaling 600,000 to 700,000 tons annually—is growing at the yearly rate of about 5 percent. Given the Government's strong desire to boost livestock output, future prospects appear relatively good.

The Philippines a'so is a viable market for soy proteins for food, thanks to the presence there of three major U.S. meatpackers. Some 50 percent of the processed meat produced by these firms has contained soy protein since the product's introduction into the Philippines 8 years ago. Currently, the protein is imported from the United States, but reportedly local production is envisioned for the not-too-distant future.

The largest meatpacker in the Philippines reports good acceptance for its protein-extended products and potential for further increases in usage. For instance, it says that ground red meat containing 20 percent soy protein enjoys good consumer acceptance. Also, the company now only uses 8-percent soy-protein concentrates in processed meats but can boost this to 15 percent under Government regulations, which would result in sizable cost savings.

The Philippine Institute of Nutrition has recognized the important role soybeans could play in upgrading diets and is planning a project to produce and make available cooked soybeans for rural diets.

In fact, owing to the large Chinese population in the Philippines, food soybean consumption already is significant. Although domestic soybeans make up the major supply for traditional foods, such as bean curds and soy sauce, some 500-600 tons of these beans must be imported each month.

Locally produced soybean oil likewise appears to have a place in the Philippine market, despite the country's large reliance on coconut oil and other locally produced vegetable oils. Currently, the Philippines consumes only 3-4 kilograms of food oils per capita a year, compared with 25 in the United States and 10 in Japan.

Thailand. Although hopes have been high that it might go the same route as the highly successful domestic corn crop, Thai soybean production has yet to make much headway. The country thus has had to import increased quantities of soybeans to supplement domestic production.

THAILAND'S climatic and soil conditions apparently have not been conducive to expansion, despite attempts by local growers and some Japanese interests to establish a large-scale industry in the highlands. However, energetic research aimed at finding an adaptable bean variety continues.

Total commercial and onfarm feed production in Thailand is estimated at close to 2.5 million tons annually, including 1.4 million tons of swine feed, 400,000 tons of broiler feed, and 70,000 tons of layer and duck feed. Formula feed production totals roughly 800,000 tons.

In 1976, the country produced about 155,000 tons of soybeans, of which 20,000 tons were exported and the rest either used domestically for food or crushed. That year, the country also had to import around 20,000 tons of soybean meal—all from Brazil—to obtain the 75,000 tons of soybean meal needed for formula feed. (The country's first imports of soybeans in 1975 were all from the United States.)

Thailand also imports 15,000-20,000 tons of peanut meal each year from India, as well as limited amounts of other proteins, and crushes a wide variety of domestic oilseeds and other products such as cottonseed, rice bran, kapok

Top, grading eggs at an outlying poultry farm in the Philippines. Left, examining soybeans on a farm in Thailand. Although efforts are being made to expand soybean production in Thailand, they have not been successful so far owing to lack of ideal growing conditions.

seed, and palm oil kernels.

Like other nations of Southeast Asia, Thailand is beginning to show an interest in soy proteins for food. This year, if the Government approves, a multimillion-dollar soy protein plant will be constructed with the possibility of producing 10,000 tons of a soy infant food annually and 2,000 tons of meat analogue.

The Government is highly interested in improving the Thai diet, particularly the protein intake of children. The Institute of Feed Research and Product Development—a private Government-backed research organization affiliated with Katsetsart University—has spearheaded textured soy protein (TSP) and soy flour research, aimed at overcoming the protein deficiencies of the traditional rice-oriented diet. Soy protein concentrates, isolates, and TSP developed by the Institute have been turned over to industry for commercial production and marketing and include foods for infants, soy-based snack foods and milk, and others.

Malaysia. This country is mainly noted for its huge and rapidly growing production of palm oil. It is nonetheless a market for high-protein feed ingredients, which are only available in limited volume from its palm kernel crush.

Malaysia's feed protein imports have included peanut and sesame cakes from India and Burma; fishmeal from Peru, Thailand, and other producers; tapioca from Thailand; and soybean meal from Brazil, Indonesia, and Thailand. A sizable share of this trade is transshipped through the busy port of Singapore.

As in other nations of Southeast Asia, the Malaysian Government is anxious to boost livestock production, but so far the incentives have fallen short of those needed to generate truly rapid expansion. Its support efforts have centered largely on tax benefits and surcharge reductions, which local sources report have had little impact on poultry and swine output.

Government yearly targets for per-capita meat consumption by 1985 are nonetheless ambitious, including: Poultry meat, 13.6 kilograms (compared with 7.7 in 1975); eggs, 102.1 (77.1); pork, 17.2 (15); and beef, 4.1 (3.1).

Against the backdrop of a 2.9 percent yearly population growth rate in this nation of over 12 million people, such anticipated production gains point to big increases in protein needs during the years ahead.

Meantime, rough estimates place the nation's current production of formula feed at about 600,000 tons per year, with perhaps 120,000-150,000 tons imported for Malaysia/Singapore feedmakers.

Poultry feed is the biggest outlet for protein ingredients, accounting for about 75 percent of the total feed output, with perhaps 120,000-150,000 tons im- 15 percent. The 12 major feed mills in West Malaysia are fairly advanced in feed technology, and rations achieve reasonably high performance.

Although poultry feed is the dominant type now produced, expansion plans for other livestock industries should boost feed use.

For instance, the Government has created a quasi-Government agency to boost cattle production and cut beef imports, which are now running at around 20 percent of need. Toward this end, a beef cattle feedlot that will handle several thousand head is planned for Jahore. Feed rations for the projects, however, will come largely from domestic products such as palm kernel cake, cocoa cake, and wastes from pineapple canning operations.

IN ADDITION, Malaysia has a large swine herd—estimated at about 1.2 million head—and one local firm has launched the first integrated swine operation. This company boasts 25,000 head of hogs, a feed plant, an abattoir, a fresh meat marketing network, and a meat processing and canning plant. It uses high-performance rations in swine feeds, fortified by proteins—including soybean meal imported mainly from Thailand and Indonesia—to achieve a 3.2 percent feed conversion.

The same firm recently began trial production of processed and canned meat using soy protein in sausage, luncheon, and corned-beef meat products. Soy proteins are generally felt to have good marketing potential in Malaysia, despite their limited use so far.

Singapore. Although its population of 2.25 million is dwarfed by that of the rest of Southeast Asia, Singapore plays a disproportionately large role in the region's trade. This is because it is a major transshipment port for the region—and for Malaysia in particular.

Soybean utilization in Singapore in 1976 is estimated at over 50,000 tons, and soybean meal usage for the estimated 500,000 tons of feed consumed in Singapore totals about 40,000 tons annually. Most of the imported soybeans are crushed, although significant volumes of beans also are used in producing traditional soy foods for the large Chinese population.

Singapore Government statistics show 11 countries supplying soybeans to Singapore in calendar 1975, including the PRC, 13,956 tons; Thailand, 7,988; and the United States, 5,223. Although 1976 figures are not yet available, Brazil reportedly joined the list of top suppliers last year.

The only major soybean crusher outside of the Philippines is located in Singapore. Because of large duty-free imports of soybean meal from Brazil and peanut and sesame meals from India and Burma, the crusher until recently was under considerable economic pressure. However, the facility is now under new management tied in with feed mill operations in Singapore and Malaysia. This change has given new life to the operation, which the management anticipates will crush 100,000 tons of soybeans in calendar 1977.

Regarding soy protein for food, long-term prospects appear quite good despite some difficulties in gaining consumer acceptance. The Government's Primary Production Department has become involved in research into greater use of soy proteins, and some private firms have explored local marketing opportunities. One firm is using soy proteins in canned foods, soy sauce, soft drinks, combined milk, and other products. Another reportedly is getting into joint ventures with third parties to produce soy milk for school lunches.

JAPAN'S COTTON IMPORTS TO FALL

Cotton imports by Japan this season are projected to fall about 100,000 bales below the 1975/76 figure to 3.1 million bales. This would mark the third consecutive season that Japanese cotton imports were below 3.3 million bales, compared with average landing from 1970/71 to 1973/74 of 3.7 million bales.

This drop reflects reduced mill demand attributable to sluggish economic growth domestically, stronger competition from cotton textile imports, larger textile stocks, and high world cotton prices. Imports of U.S. cotton, however, should exceed 1 million bales in 1976/77, compared with 650,000 bales in 1975/76, reflecting improved price competitiveness of U.S. cotton and reduced cotton available from other suppliers.

Argentina Expects Record Grain Output in 1976/77

By JAMES P. RUDBECK
U.S. Agricultural Attaché
Buenos Aires

AFTER SEVERAL YEARS of stagnant production, Argentina has gained a position of relative importance in the world grain market. Its total grain production is expected to reach a record high, while wheat exports could be the largest in more than 10 years.

Reacting promptly to the market-oriented policies of the new Government, farmers increased grain plantings in 1976/77 by 6 percent to 18 million hectares. This is the largest area Argentina has sown in nearly a decade.

With weather conditions generally favorable, total grain production was being estimated in early February at a record 27.1 million tons, 20 percent over the previous season's and 8 percent above the earlier record of 25 million tons in the 1972/73 crop year. As a result, exports—especially of wheat—are expected to increase sharply and could reach as much as 13.5 million tons.

Aggressive selling of Argentine wheat has been a major factor in the downward slide in world wheat prices over the past several months. However, as of mid-February it appeared that forward wheat sales were beginning to approach the exportable surplus, export prices were firming, and the National Grain Board had requested exporters to refrain temporarily from making further new export commitments.

Planting changes this season include a 24 percent increase in wheat area over that of 1975/76 and a 16 percent gain in grain sorghum. But, because producers were disappointed by poor corn crops of the last 2 years, area sown to that grain declined 20 percent. Farmers have been shifting gradually away from corn, and the 1976/77 sown area was almost 2 million hectares, or nearly 40 percent, less than that of 1970/71. Some of this corn land has been shifted to wheat, which can be double-cropped with soybeans or sunflowerseed in the central corn belt; and some has been shifted to grain sorghum, particularly in the western and northwestern fringes of the grain belt.

As Argentine cattle numbers remained at near-record highs—competing with grains and oilseeds for much of the same land—there was probably a limit as to how much land could have been devoted to grains this past planting season.

Wheat sowings were delayed by dry soil conditions, but ample rains followed and led to expectations of a record harvest. Just before harvesting began, there were estimates that production could have been in the order of 12-13 million tons. But rains and hail—beginning just as the harvest got underway in December and continuing through February—reduced both yields and quality of the wheat.

Argentina's first official production estimate of the 1976/77 wheat harvest is 11.7 million tons, but this figure is expected to be reduced eventually. The Office of the U.S. Agricultural Attaché currently is estimating the wheat harvest at 11 million tons—still the second largest crop on record, 28 percent over the previous season's output and 84 percent above the level of 2 years ago.

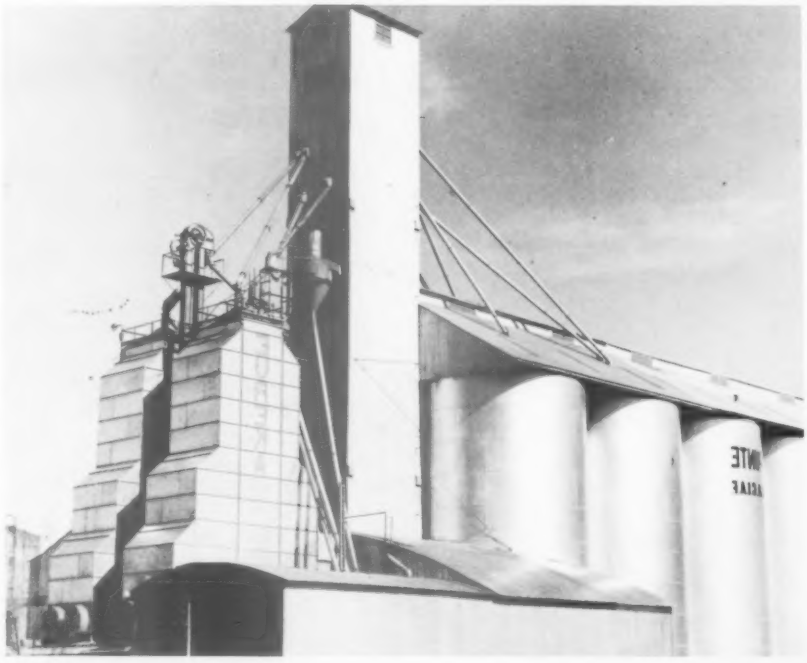
This bumper wheat crop, combined with limited domestic storage facilities,[1] brought extreme pressures to move large quantities of new-crop wheat quickly into export. As world demand was weakening at about the same time, this increased Argentine offering had an impact on world prices, at least from November through mid-February. At times, Argentine wheat was being offered to markets such as Brazil at discounts of $12 to $15 per ton below offers of comparable U.S. wheats.

By mid-February, export commitments were approaching 6 million tons. Since these commitments were initiated, based on the larger crop estimates of November-December, the National Grain Board has called on the export trade not

For further background on the current Argentine grain situation and new Government policies on agricultural production and exports, see *Foreign Agriculture*, July 12, 1976, Dec. 13, 1976, and April 4, 1977.

[1] Total grain and oilseed storage capacity is estimated to be around 15 million tons, while this season's combined grain and oilseed production is forecast at around 30 million tons.

An Argentine country elevator, similar in size and equipment to some in the United States. Storage units like this one will be called on to store much of Argentina's current grain and oilseed harvests—set at a combined total of 30 million metric tons.



to make further new export commitments pending an assessment of the size of the wheat crop.

Export commitments as of mid-February amounted to 4.5 million tons registered by private shippers and cooperatives and 1.5 million tons committed under bilateral agreements and direct sales by the National Grain Board. According to market comments, private shippers and cooperatives had made large sales to Brazil, Eastern Europe, Egypt, North Africa, Italy, and the People's Republic of China (PRC).

Commitments under bilateral agreements or direct sales by the Grain Board included 500,000 tons to Chile, 300,000 to Venezuela, 200,000 to the PRC, 160,000 to Peru, 150,000 to Algeria, 100,000 to Paraguay, and 75,000 to Libya. As of mid-February, prices and shipping periods still remained to be negotiated under a majority of the bilateral agreements.

ACTUAL exports during the first 2 months of the current marketing year (December-November) were 1.3 million tons, against only 802,000 tons shipped during December-January 1975/76. For the 1976/77 marketing year, wheat exports could reach at least 6 million tons, which compares with 3.2 million in the 1975/76 marketing season and a previous 5-year average of a mere 1.9 million. The last season in which wheat exports topped 6 mililon tons was in 1964/65.

On a July-June 1976/77 year, Argentine wheat exports are forecast at 5 million tons, based on exports to date and forward commitments. This would be an increase of 56 percent over July-June 1975/76 exports and, if realized, would mean that Argentina will have captured 7.7 percent of world trade, versus 4.6 percent of 1975/76, 3.2 percent in 1974/75, and 1.6 percent in 1973/74.

The downward pressure on wheat prices created serious domestic-market problems, one of which was possible inflation at a time when the Government was trying to reduce inflation. Prices in November were teetering right at the support price level. If the National Grain Board had purchased large quantities of wheat in order to defend this price level, the resultant generation of pesos for this purpose would have been inflationary.

In order to prevent too much from reverting into the Government's hands and to prevent at least current peso prices from falling, the Government took several actions. First, it passed wheat (then later all exports) over to the free-market rate of exchange from the previous "overvalued" rate of exchange, which combined a fixed rate and the free market rate.

Then, it instituted an exchange system, under which the peso has been devalued nearly daily and temporarily lifted the 10-percent export-retention tax on wheat exports. The result was that between early November and mid-February, the exchange rate for wheat was devalued close to 45 percent. The Board also gradually increased the minimum export price below which it will not accept export sales registrations, from $88 per ton in November to $97 by mid-February.

To discourage panic selling by producers, the Board increased the support price for forward deliveries and also instituted a "call system" for deliveries to the port elevators. Under this system the exporters "call" producers for grain, which they have previously contracted to buy within a certain delivery period (usually 30 days, although it can be 45 or 60 days) when they have ships to load.

However, the exporters are required to pay the producers on the 15th day of the delivery period, even if the exporters are unable to "call" for the wheat by that date. Previously, the producers actually had to deliver their wheat to the ports in order to receive payment, which led to mass confusion at the ports, with trucks often standing in line for weeks, waiting to unload.

These policy actions, combined with Argentina's aggressive selling drive abroad, resulted in firm local market prices, even though real prices declined as a result of an inflation rate running close to 350 percent annually. As of mid-February, the Grain Board was required to purchase only about 950,000 tons of wheat under the price support program, less than 9 percent of the estimated harvest. Also, as of mid-February, both local and export prices were rising, indicating that a significant portion of the exportable surplus had been committed and also some uncertainty as to how large the exportable surplus might be.

At an estimated 11 million tons of production, the net exportable wheat surplus (not allowing for stock changes, although beginning stocks were probably around a million tons) would be around 6.5 million tons, and export commitments as of mid-February totaled 6 million tons. If production turns out to be less than 11 million tons, the net exportable surplus will, of course, be lower.

The heavy midsummer rains that damaged the wheat crop—combined with intermittent periods of hot, sunny, and humid weather—are leading to expectations of record yields for corn and grain sorghum.

The Office of the U.S. Agricultural Attaché is forecasting the corn harvest at 7.5 million tons, or 28 percent more than the drought-affected crop of the previous season but still well below the 9-9.9 million tons produced during the early 1970's, when plantings were much higher than currently. With a crop of 7.5 million tons, the exportable surplus for the 1977/78 (April-March) marketing season would be around 3.5 million tons, versus 3 million tons expected to be shipped during the current season and annual shipments as high as 6.4 million tons several years ago,

Grain sorghum production, however, is forecast at a record 6.5 million tons, and 1977/78 (April-March) shipments could potentially be as large as 4 million tons. Shipments of grain sorghum in 1976/77 may be around 3.4 million tons, versus 2.4 million the previous season. These production and export forecasts for corn and grain sorghum are preharvest ones and are based on the tenuous nature of Argentine weather patterns.

GRAIN SORGHUM is still a relatively new crop to Argentina, and only during 1971/72 did shipments first exceed 2 million tons. It is interesting to note that this season—and again in 1977/78, if the forecasts hold up—grain sorghum exports will exceed those of corn.

According to trade sources, forward export selling of the pending corn and grain sorghum crops was slow as of mid-February. Exchange rate uncertainties prevail, and the private firms—which were excluded from local and export-market dealing for the past several years when the Grain Board was both the monopoly buyer and seller—have been preoccupied with moving the bumper wheat crop. However, once harvesting got underway in March, the increased availabilities of corn and grain sorghum should have begun to have an impact on the world market.

Maghreb Wheat Crop Off

By KENNETH L. MURRAY
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CONTINUING drought has greatly diminished the prospects for 1977's wheat production in Algeria, Morocco, and Tunisia. Wheat crops in these Maghreb countries got off to a good start with adequate moisture at planting and during the early developmental stage last autumn. But the recent extended dry period, accompanied by higher-than-normal temperatures and sunshine, has damaged wheat crops in the past 2 months.

The 1977 Maghreb wheat crop is projected at 3.9 million metric tons, sharply down from last year's production of 5.0 million. The bulk of the area's wheat harvest takes place in June and July. Even if needed rainfall returns in early April and favorable weather prevails throughout the remainder of the season, the region's 1977 wheat crop is still expected to be below average. If rains do not come soon, the wheat outturn will be similar to the poor production levels of 3.2 million tons in 1973 and 3.4 million in 1975.

Recently increasing in importance as a wheat importing area, the Maghreb's aggregate 1976/77 wheat imports dropped about 33 percent to an estimated 2.0 million tons, following the good 1976 wheat crop. Last year's production was exceptionally large despite late-season rain damage that reduced Tunisian output. Algeria's wheat production set an alltime high of about 2 million tons and Morocco had an excellent outturn of about 2.1 million tons.

The region's wheat imports for 1977/78 are projected at 3 million tons, assuming favorable weather during the rest of the season. If the drought continues, the Maghreb's wheat imports could rise to 3.5-4.0 million tons—a level that would tax the area's port facilities. Mainly because of poor wheat crops in 1973, 1974, and 1975, the region imported an average of 3.0 million tons before the downturn during the current season. If imports in 1977/78 are at the lower projection of 3 million tons, about 1.2 million tons are expected to come from the United States.

The author has just returned from a trip through North Africa.

During 1976/77, the United States will ship about 800,000 tons of wheat to the Maghreb. Of these exports, about 400,000 tons will be Durum wheat, representing about 35 percent of total U.S. Durum exports during 1976/77.

The current drought has affected the 1977 barley crop in the Maghreb even more than the wheat crop. Although wheat is the staple in the Maghreb diet, barley is an important foodgrain, particularly in southern Morocco and Tunisia.

Annual direct human consumption of barley in the three countries is about 2.3 million tons, compared with almost 7 million tons of wheat. Barley, however, is largely consumed on the farm where it is produced and does not generally enter marketing channels. Thus, barley production in the Maghreb does not have as direct an impact as wheat on the area's foodgrain import requirements.

Algeria. Last year's wheat crop of 2 million tons was the largest on record, more than doubling the average of the previous three seasons. There are still hopes for a good crop of about 1.5 million tons, but prospects grow dimmer with each day of the continued dryness. The very large 1976 wheat harvest and foreign wheat purchases during 1976/77 will probably give the country above-normal carryin wheat stocks for the start of the 1977/78 season.

Algeria, as well as the other two Maghreb countries, is mainly a Durum wheat producer. Production shortfalls are met largely with Durum imports. Even if weather conditions improve and the wheat crop reaches 1.5 million tons, wheat imports—mainly Durum—will probably rise to 1.2 million tons in 1977/78, compared with 750,000 tons in 1976/77—and an average of 1.5 million tons during the poor crop years of 1973-75. Virtually all of the estimated imports in 1976/77 are believed to be U.S., Canadian, and Argentine Durum.

Large Algerian wheat imports are expected to continue in the foreseeable future as a result of sharp annual population increases, frequent droughts, and the added wealth generated from petroleum exports.

Continued on page 16

MAGHREB COUNTRIES: WHEAT SUPPLY AND DISTRIBUTION
[In 1,000 metric tons]

Year	Production	Total Imports	Imports From U.S.	Consumption
		Algeria		
1970/71	1,435	646	251	2,081
1971/72	1,317	885	455	2,202
1972/73	1,956	646	408	2,302
1973/74	920	1,585	1,045	2,505
1974/75	1,150	1,500	717	2,500
1975/76	900	1,500	849	2,500
1976/77[1]	2,000	750	310	2,600
1977/78[2]	1,500	1,200	500	2,700
		Morocco		
1970/71	1,801	645	553	2,519
1971/72	2,189	653	498	2,806
1972/73	2,160	461	265	2,262
1973/74	1,574	1,040	577	2,614
1974/75	1,853	1,105	575	3,059
1975/76	1,575	1,235	329	2,679
1976/77[1]	2,135	1,000	380	3,024
1977/78[2]	1,800	1,200	500	3,000
		Tunisia		
1970/71	450	381	198	846
1971/72	600	229	193	900
1972/73	800	237	71	970
1973/74	700	290	138	1,020
1974/75	755	285	177	1,050
1975/76	910	301	85	1,180
1976/77[1]	880	300	120	1,162
1977/78[2]	600	600	200	1,230

[1] Preliminary. [2] Forecast.

U.S. Grain Transport System Passes Crucial Winter Test

By LEE H. KEELY
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Agricultural Marketing Service
And FLOYD D. GAIBLER
National Economic Analysis Division
Economic Research Service

NOW THAT the harsh winter of 1976/77 is over—and the spring thaw has broken up ice jams on those rivers that almost never freeze—grain shipments from America's heartland are resuming their regular flow. The U.S. transportation system appears to have successfully passed its first major test since the tieups of 1972/73, when rail, barge, and port facilities were severely taxed by then-record U.S. grain movements and unprecedented shipments from other areas of a booming economy.

The recent problem began with the severe winter weather in the Midwest this January and early February. As temperatures plunged to record lows, ice clogged the Illinois, Ohio, and the Upper Mississippi (St. Louis to Cairo, Ill.) Rivers—which rarely freeze entirely—bringing barge traffic there to a halt. At the same time, shortages of boxcars and hopper cars developed, since many were out of position for loading grain and total demand for rail cars was inflated by the waterway closures.

While some hopper car shortages are still apparent, they are decreasing rapidly, totaling 10,050 in the last week of February, compared with 12,140 2 weeks earlier. Boxcar shortages also have been persistent: as of the end of February, they stood at 2,213, compared with 1,053 in early February.

For the near term, it looks as if some spot shortages may occur, as usual, during the May-June wheat harvest in the Southwest, with the normal incidences of port congestion also.

As might be expected, barge shipments—totaling 4 million metric tons through February—were behind the unusually fast rate of 6 million tons recorded at the same time last year. However, they are showing an upward trend, and sufficient barge service is expected to be available throughout the rest of 1977.

It thus looks as if bulk transportation of farm products—and grain in particular—is rapidly returning to normal conditions. And recent estimates indicating less demand for export grain in 1976/77 than in 1975/76 point to surpluses of both box and hopper cars by midyear, followed by the usual stepped-up demand for transportation after harvest of the fall crops.

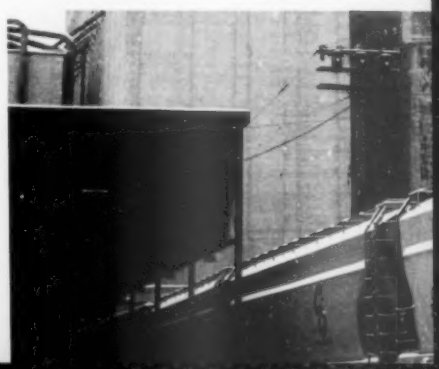
Last year, by contrast, the rhythm of traffic was far different from that recorded so far in 1977—in part the result of the much milder winter of 1976 that permitted heavy use of inland waterways and in part the result of last year's strong early-season export demand for grain.

In any case, barge shipments of grain throughout the first half of 1976 ran well ahead of those in the same period of 1975, by midyear standing nearly two-thirds above 1975 levels. Shipping then dropped sharply in the third

U.S. EXPORT ELEVATOR CAPACITY

Region	1972		1976	
	No. of elevators	Capacity[1]	No. of elevators	Capacity[1]
	Number	*Mil. bu.*	*Number*	*Mil. bu.*
Atlantic	9	42.2	9	42.3
Gulf	20	108.4	23	108.4
Lakes	29	121.7	28	141.0
Pacific	17	52.0	18	55.3
Montreal, Canada	10	69.2	9	60.6

[1] Storage capacity; does not indicate loading rate or efficiency.



Top to bottom: A railroad car is loaded with U.S. wheat; a ship takes on grain at elevator in Galveston, Texas—one of the busy gulf-port exporters of U.S. grain; and a unit train of hopper cars arrives at a Baltimore elevator with U.S. spring wheat destined for export.

quarter, reflecting the low water level on the Mississippi and concurrent drop in export demand, and picked up again in the fall quarter after the harvest. By year's end, barge shipments had risen almost 35 percent above those of 1975 to 42 million tons.

Railcar loadings likewise were strong through the third quarter, with some spot shortages of covered hopper cars showing up that quarter. However, surpluses had developed by mid-December. During seasonal peaks last year, car loadings were above 30,000 per week, compared with peaks of 26,000 so far this year.

The growth of barge and railcar loadings during the first of last year was accompanied by similar gains in grain inspections for export. And by year's end total grain inspections were up almost 13 percent from 1975 to 93 million tons.

The difference between these recent developments and those in 1972/73—the year of the historic U.S. sale of over 13 million tons of grain to the USSR—is twofold:

- First, circumstances in the country today are far different from those of 1972/73. The U.S. economy, although picking up momentum, is well off the frenetic pace of 1972/73, when all sectors were making heavy demands on the transportation system. And U.S. grain exports, which account for the heaviest transportation needs of the agricultural sector, have been sluggish so far in 1976/77 in the wake of diminished foreign demand for wheat.

In 1972/73, by contrast, not only was the system straining to move a then record 81 million tons of U.S. grain for export, but it also was having to carry nearly half this amount in the difficult winter months, owing to a lag in conclusion of that year's U.S.-USSR shipping agreements.

As a result of the currently static demand for grain, U.S. farm exports are holding at around the $23-billion-a-year level. During 1966-75, by contrast, total value of agricultural exports trebled, from $6.9 billion to $21.9 billion, while the value of grain and soybean exports quadrupled. Granted a larger part of the growth came as a result of high prices, but volumes also rose sharply—soybean exports by 279 percent and corn by 185 percent—with a consequent strain on the transportation facilities needed to move the record cargoes. Wheat exports experienced their largest growth between 1971 and 1973, increasing 131 percent.

- Second, the transportation system is better able to meet a crisis than it was in 1972/73. Grain-elevator, barge, and rail capacities are all up—the latter mainly because of more covered hopper cars that boast both larger capacities and faster turnaround times. And a monitoring system instituted since 1972/73 can quickly pinpoint weaknesses in the rail and port systems, allowing speedy diversion of cargoes away from congested ports.

Export elevators. Since 1972, number and storage capacity of port elevators have increased, but results on a regional basis have varied sharply.

For instance, the only coastal region to have significantly increased the number of elevators since 1972 is the gulf, and this may be more of a catchup than a prophecy of activity to come. For the gulf historically has handled the lion's share of U.S. grain exports and in each

RECENT TRENDS IN U.S. GRAIN LOADING AND SHIPPING
[In 1,000 bushels]

Quarter	1975		1976	
	Subtotal	Cumulative total	Subtotal	Cumulative total
Barge shipments:				
Jan.-March	251,963	—	368,256	—
Apr.-June	234,284	486,247	437,225	805,481
July-Sept.	322,711	808,958	355,114	1,160,595
Oct.-Dec.	386,123	1,195,081	450,939	1,611,534
Railcar loadings:				
Jan.-March	319,206	—	322,446	—
Apr.-June	260,865	580,071	303,132	625,578
July-Sept.	385,338	965,409	368,561	994,139
Oct.-Dec.	375,922	1,341,331	331,584	1,325,723
Inspections for export:				
Jan.-March	784,743	—	873,688	—
Apr.-June	572,956	1,357,699	864,726	1,738,414
July-Sept.	739,249	2,096,948	832,894	2,571,308
Oct.-Dec.	1,062,500	3,159,448	989,894	3,560,470

of the past 6 years has moved out more than 64 percent of total grain exports. Among factors contributing to this dominant share are good facilities, temperate year-round climate, general proximity to producing areas, a favorable supply of ocean vessels, and one of the finest navigable river systems in the world—the Mississippi.

Total elevator storage in the gulf has remained unchanged, reflecting the trend to smaller, more efficient plants.

ONE ELEMENT in the export picture, unique to the Mississippi River port area, is the floating elevator. In just the last 2 years, the number of floating rigs in operation or awaiting approval has increased markedly. These rigs employ a direct-transfer method from barge to ship and require no storage capacity. Their use thus involves ordering and scheduling problems different from a fixed plant and less capital investment than a fixed plant. Their estimated loading rate is 15,000-20,000 bushels per hour, against 60,000-80,000 bushels for many of the fixed plants.

Rail and barge capacity. An 8-year decline in the number of towing vessels was reversed in 1975, while a steady increase in average horsepower continued. The number and average size of barges also have increased. From 1967 through 1973, total capacity of the dry-cargo barge fleet grew at an average annual rate of 5.9 percent and during 1973-75, the growth rate was 6.2 percent.

Rail capacity, too, is steadily increasing. The past decade has witnessed an average annual growth of 5 percent in the number of covered hopper cars in service—in comparison to static or declining trends in carloadings, piggyback loadings, tonnage, and ton miles for the rail industry generally.

The upward trend in covered hoppers belies the situation somewhat in that general-service boxcars suitable for grain movement are being retired from service rapidly. Narrow-door boxcars are disappearing because their use in grain service is a technological relic alongside the larger and more efficient covered hoppers. Only the practical and financial limitations to expanding the hopper-car fleet even more rapidly have slowed the transition. Today, 85-90 percent of rail-transported grain moves in covered hoppers.

The unbroken trend for at least 15 years has been toward customer ownership of rail equipment. Today, nearly one-third of the covered-car fleet is not the property of the railroads, reflecting:

- A demand for specialized equipment as a result of the general shift to more sophisticated products and marketing techniques;
- Increased cost and shorter economic life of specialized equipment (due to faster obsolescence) that have forced shippers to assume part of the investment burden; and
- The long-term declining financial health of the rail industry generally.

In the case of the covered hopper-car fleet, the shift in ownership has two related implications, both tending to improve service. For the large exporters who can afford to own and manage a car fleet, ownership offers greater control over scheduling and ensures availability. It also reduces the uncertainty over demand for the equipment. Shippers dependent upon railroad-owned equipment benefit because demand by large customers competing for the same cars is reduced.

Coordination and monitoring. The iron horse is still the work horse of grain transportation. With few isolated exceptions, other than the extraordinary one of the Mississippi River port elevators, the large majority of grain moves to export by train. The export flow by rail is monitored by the Interstate Commerce Commission (ICC); and the system is proving to be very effective.

Prior to 1973, the railroad companies, in competition with one another for traffic and each acting to its individual advantage, would collectively ship more grain to a given elevator than it could conveniently handle. Coordinating efforts were not very effective.

After the 1972/73 problems, the railroads delegated to their national association, the Association of American Railroads, the authority to embargo any gulf port from further shipments when that port is not able to handle the grain. The ICC supports this voluntary self-policing, but holds backup authority to embargo any port when problems arise.

AN EMBARGO applies to all elevators within the port area, although individual elevators not encountering a problem may be excepted. The ICC normally takes action when 3 days' deliveries are backed up, and most ports at some time have been embargoed.

Reducing congestion at the ports improves utilization of equipment. Halving the turnaround time of a hopper car effectively doubles its capacity. Four years ago, turnarounds of 30 days and more were reported between midwest producing States and gulf ports. That kind of utilization turns a hopper car into very expensive rolling storage. Today, the figure is 10-14 days.

COVERED HOPPER CARS IN SERVICE AS OF DECEMBER 31, 1972-76

[In thousands]

Year	Total	Railroad owned	Shipper owned
1972	186	142	44
1973	205	151	54
1974	219	155	64
1975	228	158	70
1976	230	160	70

Association of American Railroads.

INLAND TOWING BARGES IN THE UNITED STATES

Year	Dry cargo barges	
	Quantity	Average capacity
	Number	*Metric tons*
1967	15,830	921
1969	15,890	1,011
1971	17,527	1,036
1973	19,772	1,039
1975	21,876	1,059

American Waterways Operators, Inc.

U.S. GRAIN AND SOYBEAN EXPORTS: QUALITY AND VALUE, 1966-76

Calendar year	Wheat		Corn		Soybeans	
	1,000 metric tons	*1,000 dollars*	*1,000 metric tons*	*1,000 dollars*	*1,000 metric tons*	*1,000 dollars*
1966	22,483	1,396,215	15,537	872,782	6,751	766,950
1967	17,474	1,120,207	12,926	700,935	7,169	771,554
1968	16,118	922,710	14,944	730,074	8,014	810,289
1969	12,086	725,912	13,935	721,234	8,469	822,372
1970	17,436	1,011,674	14,385	818,268	11,955	1,227,609
1971	16,221	1,004,729	12,872	741,417	11,539	1,326,816
1972	21,317	1,365,876	22,359	1,234,365	11,996	1,508,073
1973	37,444	4,045,861	33,146	2,823,645	13,221	2,762,208
1974	25,132	4,436,685	29,803	3,751,221	13,940	3,537,438
1975	30,966	5,162,252	33,442	4,422,115	12,496	2,865,238
1976	23,497	3,879,840	36,237	5,193,868	25,563	3,315,450

CHINA'S GRAIN IMPORT TALLY BOOSTED TO 5.1 MILLION TONS

On March 8, the Australian Wheat Board reported the sale of 2.0 million metric tons of wheat to the People's Republic of China (PRC) for delivery from June 1977 through January 1978. This boosts to six the number of grain purchases by the PRC since November 1976 and increases confirmed PRC purchases for calendar 1977 delivery to about 5.1 million tons.

In addition, another 500,000 to 1.5 million tons are rumored to have been purchased recently from Canada and Argentina.

In contrast, the PRC last year imported only 2.1 million tons of grain—far the lowest total for any year since China began importing grain in 1961. The years of peak imports were calendar 1973 and calendar 1974, when the PRC imported, respectively, 7.8 million and 6.9 million tons of wheat and corn.

For various reasons, the traditional suppliers—Canada, Australia, and, to a lesser extent, Argentina and France—were unable to meet all of China's abnormally large requirements during those peak years. Consequently, the Chinese, in a surprise move, began purchasing U.S. grain in the winter of 1972 for the first time since establishment of the PRC in 1949. And the United States became China's leading supplier, providing about 55 percent of its grain imports in calendar 1973 and almost 40 percent in calendar 1974.

Since then, China has reverted to the previous pattern of buying mainly from Canada and Australia since export supplies in those countries have increased.

China has regularly imported grain, primarily to supplement grain rations in northern cities. The quantity of imports in any given year has tended to fluctuate with the size of the grain harvest in the North China Plain. Furthermore, size of the fall harvest—which accounts for over 60 percent of the annual grain outturn in the region—appears to have weighed more heavily in decisions to import than has the outturn of wheat.

Much of North China has been unusually dry thus far this year, and the region's winter wheat crop now appears likely to fall short of the exceptionally good harvest of 1976. Timely rainfall within the next 2 weeks could still salvage much of the grain, but without such rain the important fall-harvested wheat crop—now being sown—also could be endangered.

—ALVA L. ERISMAN, FAS

PRC IMPORTS OF GRAIN
[In million metric tons]

Calendar year	Quantity
1961-65 average	5.6
1966-70 average	4.7
1971	3.0
1972	4.7
1973	7.8
1974	6.9
1975	3.4
1976	2,1
1977 (preliminary)	5.1

PRC PURCHASES OF GRAIN FOR DELIVERY IN 1977
[In metric tons]

Supplier	Month signed	Quantity	Delivery period
Australia	Nov. 1976	500,000	Feb.-June 1977
Argentina	Nov. 1976	200,000	Feb.-June 1977
Canada	Dec. 1976	762,000	Jan.-June 1977
Canada	Dec. 1976	1,524,000	March-Dec. 1977
Argentina	Jan. 1977	100,000	Feb.-April 1977
Australia	March 1977	2,000,000	June 1977-Jan. 1978

Canada Reveals Cattle Support Price for 1976

Canadian Agriculture Minister Whelan has announced that the 1976 support level for slaughter cattle was Can$40.16 per hundred pounds live weight. The average market price has been calculated on a quarterly basis, and payments will be made on A, B, and C grade steers and heifers on that basis.

The payment for cattle sold during the first quarter of 1976 will be $1.84 per hundredweight; no payment for the second quarter, as the weighted average prices were above the support level; third quarter payment will be $3 per hundredweight. The fourth quarter payment will be $2.98 per hundredweight.

Slaughter cattle (steers and heifers A, B, and C grades) under the 1976 program were supported at 95 percent of the average market price for the previous 5 years, indexed for changes in costs of production. The program is expected to provide about $45 million to producers for their 1976 sales of slaughter cattle. It will be continued in 1977 under the Agriculture Stabilization Act, which provides minimum supports at 90 percent of the average market prices. But, when circumstances warrant, as was the case in 1976, the support level can be adjusted to ensure farmers a "fair" return.

With this program and the recently announced Federal cow/calf program, Canadian cattlemen are potential recipients of two payments from the Federal Government in 1977. They will receive deficiency payments if market prices for slaughter cattle are below the support level; and they will receive deficiency payments for their eligible cow herds (maximum 100 head with no allowance for the first five head) if prices for feeder calves sold from September to December 1977 fall below the previous 5-year average market prices, indexed for cost changes. Payments for feeder calves will be based on an average live weight of 450 pounds and the assumption that feeder calves will be produced and marketed from 70 percent of the eligible cow herd.

It is too early to predict with any degree of accuracy, the probable level of either of these payments to cattlemen for 1977. Both of these programs have the effect of placing a floor under prices received by producers. While many producers favor higher Federal payments, some spokesmen for the Canadian cattle industry argue that these programs serve primarily to assist marginal producers during periods of low prices. They feel that this is particularly true for the Federal cow/calf program.

GERMAN ECONOMY BETTER, IMPROVEMENT TO CONTINUE

RECOVERING FROM ITS FIRST severe recession in postwar years, the West German economy entered 1977 in a relatively strong position as last year saw a larger than average increase in the gross national product (GNP), a farm sector that had suffered less than expected from last year's drought, and a steady rise in farm prices.

In addition to the sizable GNP increase, preliminarily estimated at 5.6 percent—versus a 3.4 percent decline in 1975 and the 1970-74 average of 4.5 percent—the economy also benefited from a variety of other factors. Inventory replenishment, total exports, industry profits, and worker productivity all inceased, while the climb of inflation slowed. German labor unions accepted a relatively modest wage increase instead of pressing for a larger one. Incomes from business and private property also showed an improvement, while gross wages and salaries advanced at a moderately slow rate.

Although dropping steadily, the number of unemployed in 1976 stood at more than 1 million, a figure relatively high by German standards, but still lower than the previous year's 1.2 million. Less heartening was the weak growth of private sector consumption expenditures—just 3.4 percent—and an even smaller percentage growth in the public sector. In addition, fixed investment growth was not up to expectations, and construction investment was particularly low, climbing by just 2.5 percent.

Nonetheless, balancing the good against the bad, West German economists expect the current strengthening trend to continue through 1977, but at a slower pace. Forecasts for 1977 cover a wide range of expectations. Some observers believe the GNP will increase 3-4 percent, others 5.5 percent. The West German Government sees a climb of 5 percent.

But there are some conditions attached to the expected improvement. German exports and the buildup in inventories must continue at a high level, and investments in machinery and equipment must retain their moderate rate of growth. And, as was the case in 1976, the anticipated growth will depend to a large degree on a further increase in productivity and a drop in unemployment, to around 1 million persons.

Imports. An indication of West Germany's economic strength last year is the volume and value of its foreign trade.

Imports of industrial and agricultural products from all countries in 1976 are estimated at $87.5 billion (versus $74.9 billion in 1975), and exports at $101.5 billion (versus $90.2 billion).

Last year U.S. exports to West Germany totaled $6.5 billion ($5.8 billion in 1975) and imports $5.7 billion (versus $5.3 billion the previous year). The share of agricultural products in U.S. shipments to Germany was 28 percent in 1975 and 25 percent in 1976.

Rising for the ninth consecutive year, West German agricultural imports reached a record $15.7 billion in 1976—up from $13.7 billion in 1975—with larger quantities and values for potatoes, fruit juices, skim milk powder, various feeds, wool, tobacco, and coffee responsible for the increase. Substantially lower values were reported for oilseeds and vegetable oils, deciduous fruits, sugar, and cocoa. Fruits and vegetables, oilseeds and products, livestock and meats, grains, coffee, tea, beverages, wool and vegetable fibers, and certain dairy products accounted for almost 75 percent of the value of all agricultural imports.

Farm products imports from the United States also hit a record in 1976 of $1.83 billion—17 percent higher than in the previous year. Gains were mainly in purchases of corn and other feeds, rawhides and skins, and tallow. Because of smaller crops in other producing countries, imports of U.S. sunflowerseeds were up 63 percent in volume and 51 percent in value to $52 million. But the value of soybean purchases increased only slightly to $303 million because of lower average unit prices.

Appearing on the German market for the first time were U.S. potatoes. Sales of fresh potatoes totaled $4.4 million, and were made possible by the easing of import restrictions by West Germany. In addition, Germany imported $9.4 million of U.S. dehydrated potatoes and potato flakes.

Feedgrains are the major agricultural commodity in U.S.-West German trade. In 1976, West German imports of U.S. feedgrains totaled 5.74 million tons valued at $677 million. Imports of U.S. oilseeds and products—principally 1.38 million tons of soybean and 1.16 million tons of oilcake and meal—were valued at $573 million. Other imported items included foodgrains (925,000 tons valued at $151 million), tobacco (34,000 tons, $105 million), animals and animal products ($99 million), and fresh and preserved nuts, vegetables, and fruits ($123 million).

These trade data are not adjusted for transshipments. West Germany typically imports large quantities of U.S. soybeans and grains through Dutch and Canadian ports. Simultaneously, U.S. soybeans and grains are transshipped through West Germany to several East European countries. These transshipments data are not available for calendar 1976.

U.S. shares of German farm imports in 1976 ranged from 76 percent for sunflowerseed (mainly for crushing), and 67 percent for soybeans, to 14 percent for hides and skins, and 3 percent for cotton. Some of these market shares, particularly for sunflowerseeds, soybean meal, corn, tallow and grease, and hides and skins—and to a lesser degree for tobacco—were significantly larger than the previous year's shares. The U.S. market share for soybeans, wheat, and cotton were smaller.

Crop production. Belying predictions made in the summer and early fall of 1976, final crop production data indicate that last year's drought had much less effect than expected on yields of major cash crops such as grains, sugarbeets, and potatoes. With acreage almost unchanged, total grain crops were down only 9 percent, from 21.2 million to 19.1 million metric tons.

Bread wheat output fell by 4 percent to 8.9 million tons, while the percentage fall for feedgrains was larger, based on a drop in outturn from 12 million tons to 10.2 million.

Potato production was down by 10 percent to a record low. The trend had been erratically downward for several years—from 15 million tons in 1972 to 10.8 million in 1975—plunging to the new low of 9.8 million tons in 1976.

Sugarbeet output failed to respond to an expanded area and was 4 percent less than in 1975—18.7 million tons in 1976

versus 19.1 million a year earlier. However, the sunny weather resulted in higher sugar content, and total refined sugar output is expected to reach 2.4 million metric tons, 4 percent higher than the previous record set in 1975/76.

Production of vegetables—including home-grown vegetables—has been on a downtrend since 1972, falling from 1.9 million tons to an estimated 1.5 million in 1976. Fruit and wine outturn, however, generally has been rising during that period, with fruit going from 2.4 million tons to 2.8 million, and wine from 746,000 tons to 866,000 tons.

Dairy, livestock, and poultry production. Milk output rose 2 percent in 1976, compared with 1975's, to 22.1 million tons, and is expected to see a rise of 3 percent in 1977, to an estimated 22.8 million tons. The increased output will add to the EC surplus problem, arising from high price support levels and costly EC programs that have encouraged improved breeding and feed techniques, and consequent steadily increasing yields.

Meat production rose 3 percent between 1975 and 1976 to 3.73 million tons as beef outturn went from 1.21 million tons to 1.28 million, veal from 57,000 to 55,000 tons, and pork from 2.32 million tons to 2.38 million. Lamb and mutton production rose slightly in the period. In 1977, percentage output growth is expected to be less than last year's, although total meat production will climb to 3.76 million tons.

Production of broilers and other poultry is minimal compared with that of beef, pork, and lamb, amounting to just 8 percent of the meat production total. Following a strong expansion during the past few years, which brought poultry meat outturn from 266,000 tons in 1974 to 305,000 in 1976, a slight increase—to 310,000 tons—is foreseen for 1977. Egg production remained fairly stable at about 15 billion for the past several years.

The German livestock and poultry industries depend on the use of significant supplemental supplies of grains and oilseed meals from foreign countries. Changing production emphasis on various domestic crops will result in higher or lower feed imports, rather than adjusted swine, cattle, or poultry inventories. The reduction in feedgrains between 1975 and 1976 from 12 million to 10.2 million tons, and a drop in hay production from 20.1 million tons to 15.3 million, probably will influence the level of feedgrain imports. During 1977, it is likely West Germany will require larger shipments of U.S. corn for use in hog feeding and of soybean meal for dairy supplements.

West German data show that in 1976, numbers of cattle, milk cows, and bred sows were higher than in the previous year, while numbers of hogs and laying hens were lower. Cattle numbers rose from 14.4 million head in 1975 to 14.5 million in 1976, but are expected to decline slightly in 1977. The number of milk cows also has showed no steady pattern of growth, as they were 2 percent lower in 1975 than in 1974, and up slightly in 1976. In 1977, they are expected to be down 1 percent to 5.38 million, compared with 1976's 5.4 million.

The hog total also showed a steady fall from 20.4 million head in 1974 to 19.8 million in 1976. This year, however, the total is expected to be about 597,000 head higher. The country's laying flock in 1976 was about 62 million birds, and is expected to rise another 1 million birds in 1977.

Farm prices. Setting new records in 1976, farm prices were strong for most commodities and particularly for crops, milk, poultry, and eggs. Prices of cattle and hogs were also up, but by a lesser percentage since prices generally ran below 1975 levels for the last half of 1976.

According to West Germany's Federal Ministry of Agriculture, 1976 farm prices (compared with those of 1970) were highest for fruit, which showed a whopping 102-percent rise. Increasing by more than 40 percent were prices for cattle (other than slaughter), milk, and eggs. In the 30-percent increase bracket were prices of slaughter cattle and some other types of livestock. In the 20-percent increase range were grains, oilseeds, calves, and hog prices.

Compared with those of 1970, fertilizer costs rose by 58.5 percent; feed, by 26.6 percent; seed, by 20.8 percent; livestock, by 42.3 percent; fuel, by 65.4 percent; construction, by 40.2 percent; and new machinery, by 46.3 percent.

Food prices. Over the years the pattern of West German food consumption has changed, and as incomes rise, the amount of money spent on food is also expected to climb while the percentage may fall. West German data show that during March-June 1976, medium-income families of four spent an average of DM1,893. Families in the next higher income bracket averaged expenditures of DM3,158 for consumer goods DM495 (15.5 percent) of this for food.

Food energy intake per person—now averaging 3,000 calories per day and considered too high by most nutritionists—has been about unchanged during the past 20 years, but there have been switches in the makeup of the German diet.

Per capita grain consumption, which fell substantially during the earlier period of strong income growth, has also stabilized during the past several years. There is a moderate upward trend in wheat consumption, whereas rye use is decreasing. Per-capita wheat-flour usage in 1975/76 was 47.7 kilograms, up slightly from the previous year.

MEAT CONSUMPTION has remained strong, even during the economic downturn of the recent past. However, all of the gain was in pork, however, use of which increased by more than 1 kilogram annually since 1970, while higher priced beef remained virtually unchanged. Pork consumption rose from 41.7 kilograms per person in 1973/74 to 44.1 kilograms in 1975/76, while the climb in beef consumption was only from 20.9 kilograms to 21.3. The rise in per capita usage of meat and poultry (excluding fats) was to 82.8 kilograms, up from 82.5 in 1974/75. During that period poultry consumption advanced from 8.8 kilograms to 9.1.

Consumption of fats and oils has declined gradually from a peak of 26.9 kilograms during 1968/69-1970/71 to 25.1 during the past 2 years. Butter has fallen from 8.7 kilograms to 6.6 whereas margarine has stabilized at about 8.5. Edible vegetable oils stood at 4.8 kilograms per capita in 1973/74, fell slightly in 1974/75, but recovered to 4.8 kilograms in 1975/76. Shortening use followed the same pattern, sagging slightly from 1.6 kilograms in 1973/74, but recovering in 1975/76.

Based on report from
Office of U.S. Agricultural Attaché, Bonn

March International Food Shows in Asian Capitals Draw 81 U.S. Firms

EIGHTY-ONE U.S. food companies took part in a three-market drive during March to expand the export of consumer-ready foods to East and Southeast Asia. Food shows in Tokyo, Hong Kong, and Jakarta produced on-floor sales exceeding $3.4 million and projected sales for the next 12 months approaching $40 billion.

The March 14-18 Tokyo exhibit was part of a major international exposition in which U.S. products competed for attention with foods from 10 other countries. The Hong Kong event, March 23-25, was a U.S.-only show directed toward the hotel and restaurant trade. The smaller Jakarta show, March 30-31, was also U.S.-only, limited to U.S. exhibitors exploring possible marketing opportunities in the growing Indonesian economy.

Meats, poultry products, fruits, and vegetables received major attention from buyers at the three shows, but a wide variety of other specialty products and convenience foods were popular in sampling. All three shows were trade events limited essentially to commercial buyers and food exporters. All were sponsored by the Foreign Agricultural Service in cooperation with U.S. State governments, trade organizations, and food companies.

The Tokyo exhibit, part of the Fifth International Hotel and Restaurant Show at famed Harumi pier, featured exhibits from 60 U.S. commercial firms, plus participation by six commodity trade associations. The 5-day show produced onsite sales reported at $3.2 million and a 12-month sales projection of $38.2 million resulting from the week's work.

U.S. participation in the Tokyo show was aimed at increasing the sale of processed or "consumer-ready" foods in the fast-growing Japanese market. Japan is already a customer for an annual $3.6 billion worth of agricultural products from the United States, but over 80 percent of that value comes from bulk commodities led by feedgrains, soybeans, wheat, and cotton. The U.S. goal in the recent show was to capture a larger share of the $5.8 billion spent by the Japanese for imports of consumer-ready foods.

The United States has, in fact, through Government-industry promotions, already increased its share of that business from 4 percent to 7 percent since 1970—to a level approaching $400 million in 1976.

Commercial exhibitors at the Tokyo show came from 21 U.S. states, led by California with 19, Minnesota with 10, and New York with 5. Oregon, Iowa, Illinois, and Washington provided three exhibitors each, while Pennsylvania and Hawaii each supplied two. Other States represented by commercial exhibitors included Georgia, Colorado, Wisconsin, Maryland, Ohio, Utah, Massachusetts, Idaho, Missouri, Florida, Michigan, and Indiana.

Eighteen exhibitors promoted fruit or fruit juices, and 16 had vegetables on display. Thirteen companies exhibited red meat, 12 showed poultry products, and 6 featured seafood.

Nine firms offered snacks, candies, desserts, and soft drinks, while another nine showed a variety of soups, cheese, shortening, spreads, flavorings, sauces, and textured vegetable protein. Four exhibitors displayed prepared and premixed foods.

JAPAN, with a gross national product of $550 billion in 1976, is the third largest national economy in the world behind the United States and the Soviet Union. As such, Japan has attracted increasing attention from other food-exporting nations. Some 30 countries are pushing their agricultural products in Japan.

New Zealand and France have expanded their market promotion, as have Poland and the United Kingdom. These countries had exhibition areas in the recent International Show, along with Belgium, Denmark, Norway, India, Sri Lanka, and the Netherlands.

Hong Kong, although a much smaller market than Japan, drew 38 U.S. food companies to the U.S. processed food show there on March 23-25, half of

Exhibitor Comments In Tokyo, Hong Kong

Dennis J. Dunn, executive director, Mid-America International Agri-Trade Council (MIATCO), Chicago: "Bolstered by our success here (in Tokyo), we are very confident and very pleased. Even now, at times when money is tight, exchange rates are not terribly favorable, and yet as we review the Tokyo activity . . . we know that the Far East market is here to buy American foods."

E. Barrett Schlenck, foreign marketing specialist, Minnesota Department of Agriculture, St. Paul: "This is our fifth trip to Tokyo to participate in this affair, and each year our group has increased in size. It has resulted in opening up some new markets to people who were here before who have added to their lines. It has resulted in our obtaining new distributors and trading companies to forward the Minnesota products."

Simon Katz, international sales manager for Colonial Beef Company, Philadelphia: "We feel that Japan offers the greatest untapped market for portion control meats in the world . . . we have written some orders, and we look forward to much more business in Japan."

Joseph E. Manion, Tokyo, Far East director, Poultry and Egg Institute of America: "The Hong Kong processed food show provided the American poultry and egg industry an opportunity to display and sample a full range of U.S. turkey, chicken, and further processed products such as turkey ham, salami, turkey and chicken hot dogs, turkey bologna, as well as whole turkeys. Because of the high nutritional value and low price of these products, they were of great interest and well received by the local tradesmen."

Richard L. Seaton, representing the California Avocado Board, Newport Beach, Calif.: "Initially we feel that the institutional market in Hong Kong is going to be the most important thing for us to develop here . . ."

which had exhibited the preceding week in Tokyo. More than 2,000 food items from 15 U.S. States were on display in Hong Kong. Floor sales of $132,000 were reported, along with projected business estimated at $500,000 for the year ahead.

Eight exhibitors featured poultry and poultry products, seven featured and sampled red meats, and more than a dozen showed fruits and vegetables. Exhibitors included 4 wine producers, 3 candy companies, and 15 displaying and sampling a variety of food bases, mixes, spreads, spices, and specialty foods.

The Crown Colony of Hong Kong, with a population of only 4.5 million, was a market for $206 million in U.S. agricultural products in 1976, compared with $130 million in 1975 and $185 million the preceding year.

Hong Kong is a major importer of U.S. fruit, ranking second only to Canada as a market for U.S. oranges. It also imported 17,237 metric tons of U.S. chicken meat in 1976, ranking third in the world as a market for that U.S. product.

Hong Kong is also an important market for U.S. cotton, ginseng, wheat, animal feeds, fresh grapes, fresh apples, cattle hides, and tobacco.

The Hong Kong market is regarded as highly quality conscious. Convenience foods are gaining in popularity as incomes increase, as larger food stores enter the market, and as family buying habits shift away from the daily marketing pattern that is traditional in Asia.

The Jakarta show had 26 U.S. food companies on hand, reflecting the recent growth in that economy based on petroleum and palm oil development. Many exhibitors said they considered Indonesia an unknown quantity and their participation in the Jakarta show was exploratory. Nineteen of the Jakarta exhibitors had taken part earlier in the Tokyo show, the Hong Kong show, or both.

U.S. agricultural exports to Indonesia have expanded sharply—from $118 million in 1975 to $234 million in 1976. Most of this growth, however, has been in rice, wheat, cotton, and other bulk commodities. Indonesia has restrictions on the commercial import of many food products, and U.S. market development activity there is coupled with efforts to obtain a reduction or removal of such restrictions.

Above, visitors to the International Food and Restaurant Show in Tokyo sample french fries, one of the items exhibited by the American Potato Company, San Francisco. The Tokyo show featured exhibits from 60 U.S. commercial firms, plus participation by several commodity trade associations. Below, Japanese tradesmen were eager to try U.S. cherries exhibited by the Traverse City Canning Company and West Bay Exports, Traverse City, Mich.

Seven companies exhibited in all three of the March shows in Asia: AJC International Inc., Atlanta, Ga.; Food Producers Inc., Minneapolis, Minn.; Intercontinental Traders, Los Angeles, Calif.; North Pacific Canners and Packers Inc., Portland, Oreg.; Ore-Ida Food Inc., Boise, Idaho.; Shenandoah Valley Poultry Co., New York, N.Y.; and Wolfstein International, Los Angeles, Calif.

Also participating in all three shows was the Mid-America International Agri-Trade Council (MIATCO), a marketing organization with headquarters in Chicago, representing 12 State departments of agriculture.

The Poultry and Egg Institute of America, a producer and trade association headquartered in Washington, D.C., participated in all three shows. The Potato Board, Denver, Colo., and the California Avocado Board, Newport Beach, Calif., took part in the Tokyo and Hong Kong shows. The California Cling Peach Advisory Board and the California Fruit Cocktail Committee, San Francisco, the U.S. Dry Pea and Lentil Council, Inc., Spokane, Wash., and the American Soybean Association, Hudson, Iowa, all exhibited in the Tokyo show.

—By J. Don Looper, FAS

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World Weather

North America—Heavy precipitation throughout most of the Corn Belt in the United States should help replenish subsoil moisture reserves. Significant precipitation also fell in Kansas, Oklahoma, and Texas, the heart of U.S. hard winter wheat production that has been adversely affected by a severe drought. Light rains also fell in California, mainly in the south, and along the coasts of Washington and Oregon. Scattered showers fell in the wheat growing region of Washington.

South America—Heavy thunderstorms struck the rich agricultural areas in southern Brazil, Uruguay, and Argentina. Three to four inches of precipitation were recorded in parts of the Brazilian States of São Paulo, Paraná, and all of Rio Grande do Sul. Some damage probably occurred to maturing crops in these areas. Heavy showers fell along the east coast of Brazil, relieving the dry spell that had developed in parts of the eastern states.

Asia—In the People's Republic of China (PRC), significant precipitation was confied mainly to an area stretching across the midsection of that country from the Szechwan Basin and southern Shensi Province in the west to the east coast. This included the extreme southern portion of the North China Plain, the PRC's main winter wheat belt, but most of that important region was dry. Light, scattered showers fell in Kwangtung Province, but much more water is needed for transplanting the early rice crop.

India continued seasonally hot and dry. Unirrigated crops are under stress over much of that country. In Australia, seasonal tropical activity resulted in heavy rainfall in the northwestern coastal regions.

USSR—Mild temperatures and only slight precipitation throughout European Russia continued to favor field work and spring sowing is well underway in many southern regions. Snow cover has disappeared over most of the important agricultural regions, with temperatures consistently above normal for the past 6 weeks.

Europe—In Western Europe, it was generally wet with light to moderate rainfall in the United Kingdom and the northern portion of the Continent. Mediterranean France received some much need precipitation, and Italy reported variable showers. It was dry in Spain. Precipitation in Eastern Europe was confined to the northern countries.

Maghreb Wheat

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Morocco. The 1977 Moroccan wheat crop also appears uncertain. After an excellent start, the crop has suffered from sparse rains since mid-January. Hopes for a fair wheat outturn dwindle with the absence of much needed rains.

Currently, Morocco's 1977 wheat crop is estimated at 1.8 million tons, down from last year's above-average 2.1 million tons. Wheat imports during 1977/78 are projected to reach 1.2 million, with about 500,000 tons coming from the United States. Imports during the current 1976/77 season are estimated at about 1.0 million tons, including 380,000 tons of U.S. wheat.

Morocco imported 1.2 million tons of wheat in 1975/76 following a harvest of 1.6 million tons. That year, the discharge rate at Moroccan ports reached as high as 120,000 tons during some months—a level that strained the ports' capacity. Annual imports much above 1.2 million tons would be hard to handle, especially wheat movements from the ports to interior points.

Tunisia. This country is probably the hardest hit by the Maghreb drought. The principal grain-producing areas of Tunisia have been without appreciable rain since mid-January. The 1977 wheat crop—expected to be the worst in 6 years—is estimated at 600,000 tons, compared with the 880,000 tons produced last year, and the 910,000 tons harvested in 1975.

Tunisia's foodgrain supply situation for 1977/78 will be tight because of the poor crop and minimal carryover stocks from the 1976/77 season. The small 1977 wheat crop will have to be supplemented with a high level of imports to meet consumption needs. But the country's imports will be limited by its port capacity, which probably can handle only about 600,000 tons a year. Although this level would be twice that of recent years, it still would fall short of satisfying consumption demands if the 1977 Tunisian crop continues to deteriorate in the drought.

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